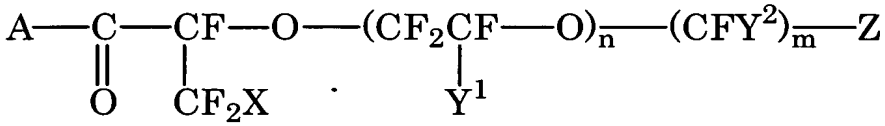
PRELIMINARY AMENDMENT
National Stage of PCT/JP03/07592
Attorney Docket No.: Q84706

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

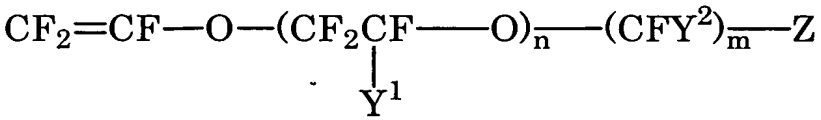
LISTING OF CLAIMS:

1. (original): A method for producing a water-soluble fluorine-containing vinyl ether which comprises subjecting a fluorine-containing 2-alkoxypropionic acid derivative represented by the following general formula (I):



(I)

(wherein A represents $-OM^1$ or $-OM^2_{1/2}$, and M^1 represents an alkali metal and M^2 represents an alkaline earth metal; X represents a halogen atom; Y^1 and Y^2 are the same or different and each represents a fluorine atom, a chlorine atom, a perfluoroalkyl group or a fluorochloroalkyl group; n represents an integer of 0 to 3, and n of Y^1s may be the same or different; m represents an integer of 1 to 5, and m of Y^2s may be the same or different; and Z represents a hydrophilic group) to thermal decomposition at a temperature of not lower than 50°C but lower than 170°C in the presence of a coordinating organic solvent to give a water-soluble fluorine-containing vinyl ether represented by the following general formula (II):



(I I)

(wherein Y^1, Y^2, Z, n and m are as defined above),

said coordinating organic solvent having a coordinating property with an ion of said M^1 or an ion of said M^2 and

said coordinating organic solvent being in an amount of 10 to 1,000 parts by mass per 100 parts by mass of said fluorine-containing 2-alkoxypropionic acid derivative.

2. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 1,

wherein the hydrophilic group is $-COOM^3$, $-OSO_3M^3$, $-SO_3M^3$, $-O_2PM^3$, $-OP(OM^3)_2$, $-O_2P(OM^3)$, $-OPO(OM^3)_2$, $-PO_2(OM^3)$, $-PO(OM^3)_2$, $-COOM^4{}_{1/2}$, $-OSO_3M^4{}_{1/2}$, $-SO_3M^4{}_{1/2}$, $-O_2PM^4{}_{1/2}$, $-OP(OM^4{}_{1/2})_2$, $-O_2P(OM^4{}_{1/2})$, $-OPO(OM^4{}_{1/2})_2$, $-PO_2(OM^4{}_{1/2})$, $-PO(OM^4{}_{1/2})_2$, or a substituted ammonio group forming a salt with a conjugate base of an inorganic acid or fatty acid (its substituents being two or three alkyl groups which are the same or different), wherein M^3 represents an alkali metal, a hydrogen atom or $NR^1R^2R^3R^4$ in which R^1, R^2, R^3 and R^4 are the same or different and each represents a hydrogen atom or an alkyl group containing 1 to 4 carbon atoms, and M^4 represents an alkaline earth metal.

3. (currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 1 ~~or 2~~,

wherein the thermal decomposition is carried out at a temperature not lower than 50°C but lower than 150°C.

4. (currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 1~~, 2 or 3~~,

wherein the coordinating organic solvent is in an amount of 30 to 300 parts by mass per 100 parts by mass of the fluorine-containing 2-alkoxypropionic acid derivative.

5. (currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 1~~, 2, 3 or 4~~,

wherein the coordinating organic solvent comprises an aprotic polar organic solvent.

6. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 5,

wherein the aprotic polar organic solvent is an ether solvent, sulfolane, hexamethylphosphoric triamide, acetonitrile, dimethylformamide, dimethyl sulfoxide, ethyl acetate and/or tetramethylurea.

7. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 6,

wherein the ether solvent is a glyme-based solvent, a diethyl ether, a diisopropyl ether, tetrahydrofuran, dioxane, anisole and/or a crown ether.

8. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 7,

wherein the glyme-based solvent is dimethoxyethane, diethoxyethane, monoethylene glycol dimethyl ether, diethylene glycol dimethyl ether, triethylene glycol dimethyl ether, tetraethylene glycol dimethyl ether, diethylene glycol monomethyl ether and/or diethylene glycol monoethyl ether.

9. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 5, wherein the aprotic polar organic solvent is a glyme-based solvent.

10. (currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 5, ~~6, 7, 8 or 9,~~

wherein the aprotic polar organic solvent has a water content not exceeding 250 ppm.

11. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 5,

wherein the aprotic polar organic solvent is diethylene glycol dimethyl ether.

12. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 11,

wherein the diethylene glycol dimethyl ether has a water content not exceeding 250 ppm.

13. (currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12,~~

wherein the fluorine-containing 2-alkoxypropionic acid derivative represented by the general formula (I) has a water content not exceeding 0.1% by mass.

14. (currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13,~~

wherein n is 0 or 1.

15. (currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 2, ~~3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14,~~

wherein Z is $-SO_3M^3$ or $-SO_3M^4{}_{1/2}$.

16.(currently amended): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 2, ~~3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 or 15,~~

wherein Z is $-SO_3M^3$, A is $-OM^1$ or $-OM^2_{1/2}$, Y^1 is a trifluoromethyl group, Y^2 is a fluorine atom and m is 2.

17. (original): The method for producing a water-soluble fluorine-containing vinyl ether according to Claim 16, wherein n is 0.